



Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
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NOV 6 1998

98-DOE-03837

Mr. Tim Rehder
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999 18th Street, Suite 500
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Mr. Steve Gunderson
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246

Gentlemen:

The U.S. Department of Energy Rocky Flats Field Office is pleased to transmit the 1998 annual updated environmental restoration (ER) ranking to your agencies. The Rocky Flats Cleanup Agreement (RFCA), Attachment 4, contains the prioritized list of ER sites developed to select the top priority sites for remediation. The list was developed to be used as an aid in planning and prioritizing removal action at Rocky Flats Environmental Technology Site (the Site). The sequence of remediation activities at the Site has generally followed the prioritization. Other factors that also influence the remediation sequence are funding, project cost, resource availability, data sufficiency, and integration with other Site activities. Prioritization accelerates the cleanup process of the highest risk sites first, and more quickly reduces risks to human health and the environment. The prioritization of cleanup also results in cost reduction by allowing better planning and more efficient utilization of resources.

The original methodology for prioritizing sites for remediation was developed in 1995 in a collaborative effort between the United States Environmental Protection Agency, the Colorado Department of Public Health and the Environment, the Department of Energy, Kaiser-Hill Company, L.L.C. (K-H), and Rocky Mountain Remediation Services (RMRS). RMRS subsequently implemented this methodology. The result was a prioritized list of ER sites, including a list of ranked sites that require more information. In accordance with RFCA, Attachment 4, the ranking was updated in 1996 and 1997. These updates included the action level framework values, scoring scale, groundwater plumes, potential areas of concern, and a professional judgment factor.

ADMIN RECORD
SW-A -002793

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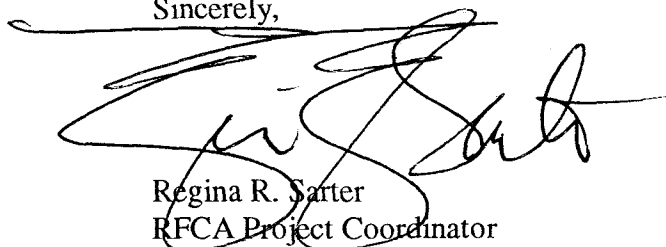
The enclosed 1998 ER ranking has no modifications to the prioritization methodology. The list has been updated as follows:

- The source removal action at individual hazardous substance site (IHSS) 108 trench T-1 was completed;
- The Building 123 site (IHSSs 148, 121, Building 123 Under Building Contamination [UBC], Resource Conservation and Recovery Act Unit 40) was added to the ER Ranking spreadsheet.
- The remedial action for the Mound site plume was completed.
- Additional available information was used to modify the ranking of the following sites:
 - Property utilization and disposal (PU&D) yard;
 - PU&D yard plume;
 - east trenches plume;
 - IHSS 118.1;
 - 903 pad & lip area (IHSSs 112 and 115);
 - Bowman's pond (PAC 700-1108);
 - Trench 7 (IHSS 111.4); and
 - Building 440 area.
- The status column is consistent with the *1998 Annual Historical Release Report Update* with respect to proposed no further actions.
- The low-ranked portions of the prioritized list have been combined.

Some of the data used for ER ranking has not been validated at this time. The K-H team anticipates that the data will be validated in fiscal year 1999. Any changes in ranking due to data validation will be incorporated into the ranking as necessary.

If you should have any technical questions regarding this transmittal, please call Norma I. Castaneda at 303-966-4226 or contact me at 303-966-7252.

Sincerely,



Regina R. Sarter
RFCA Project Coordinator

Enclosure

Tim Rehder
Steve Gunderson
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cc w/Enc:

A. Rampertaap, EM-45, HQ
G. Kleeman, EPA
C. Spreng, CDPHE
R. DiSalvo, OCC, RFFO
Administrative Record

cc w/o Enc:

J. Legare, AMEC, RFFO
B. April, RLG, RFFO
R. Tyler, ERWM, RFFO
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L. Brooks, K-H
L. Butler, K-H
D. Shelton, K-H

ER Ranking

Rev. 9/98

Status	Rank	HHSS Number and Name	Total Tank Contents	Total Ground Water	Total Subsurface Soil	Total Surface Soil	Total Chemical Score	ALF Score	SW Impact Multiplier	Potential for Further Release Multiplier	Professional Judgement Multiplier	Total Priority Score	Exceeds Tier I AL	General Comments
C-96	1	109 Ryan's Pit		33679	2	<1	33681	10	2	3	1	60	yes	Source removed
C-96	2	110 Trench T-3		26101	1612	<1	27113	10	2	3	1	60	yes	Source removed
C-96	3	111.1 Trench T-4		26101	78	n	26179	10	2	3	1	60	yes	Source removed
SR-98	4	108 Trench T-1		11	11080	<1	11091	9	1	3	2	54	yes	FY98 - source removed
C-97	5	113 Mound		19064	6	1	19071	9	3	2	1	54	yes	FY98 - source removed, treatment and trench fill in FY99.
	6	112/155 903 Pad and Lip Area		41426	1449	108	42983	10	2	2	1	40	yes	Source of Mound Plume, removed
	7	East Trenches Plume		26105			26105	10	3	1	1	30	yes	Characterization in FY98/FY99, remediation planned for FY2001.
IAC-98	8	118.1, 132 and 121 Tanks 9 & 10	1194	50000000	2325	2	50003521	10	1.5	2	1	30	yes	Impact on surface water in the S. Walnut Creek drainage
IAC-96	9	Mound Plume		19067	n		19067	9	3	1	1	27	yes	Tank 10 source removed. Carbon Tet Plume Source
IAC-96	10	121 Tank T-40	3570	n	n	<1	3570	7	1	3	1	21	yes	Groundwater collection and treatment system in place
IAC-96	11	121/124.1/124.2/125 PW Tank T-16N	1453	<1	<1	n	1453	7	1	3	1	21	yes	Source removed, tank foamed and stabilized
IAC-96	12	121 Tanks T-2/T-3, 122-Underground Concrete Tanks	751	270	<1	29	1050	7	1	3	1	21	yes	Source removed, tank foamed and stabilized
IAC-96	13	121/124.3 Process Waste Tank T-14	1000	<1	<1	n	1000	6	1	3	1	18	yes	Source removed, tank foamed and stabilized
	14	101 Solar Ponds		2403	<1	14	2417	7	2	1	1	14	yes	HHRA 10-4 to 10-6, groundwater from 118.1 not used in ranking
	15	Solar Ponds Plume		2403			2403	10	1	1	1	10	yes	Plume due to NO ₂ impacts surface water in N. Walnut Creek
	16	903 Pad & Ryan's Pit Plume		73365			73365	10	1	1	1	10	yes	HHSS 118.1 is suspected source/DNAPL present
	17	Carbon Tetrachloride Plume (118.1)		50000000	n	n	50000000	8	1	1	1	8	yes	No impact on surface water in the Woman Creek drainage
	18	881 Hillside Plume		9167	n	n	9167	7	1	1	1	7	yes	No impact on surface water
	19	Industrial Area Plume		2615	n	n	2615	6	1	1	1	6	yes	New 1995 data-PAHs in surface soil
	20	121 Tank T-29 (Tank 207)	15	<1	<1	4110	4125	7	1	2	0.5	7	yes	Source not present
	21	PUD Yard Plume		553	n	1	579	6	1	1	1	6	yes	Paved
	22	160 Rad Site Bldg 664 Parking Lot		578	n	1	579	6	1	1	1	6	yes	Source may be due to UBC at B881
	23	158 Rad Site - B551/B554		418	n	1	419	5	1	1	1	5	yes	No pathway known
	24	Building 881 Area Plume		257	n		257	5	1	1	1	5	yes	Compliance, presumptive remedy for closure
	25	Building 881 UBC		257	7	n	264	5	1	1	1	5	yes	Process knowledge of probable influent liquids
	26	114-Present Landfill		415	<1	31	446	5	2	1	0.5	5	yes	Score includes newly discovered sample data
	27	Present Landfill Area Plume		415			415	5	2	1	0.5	5	yes	HHRA, less than 10-6, metals
	28	Bowman's Pond (PAC 700-1108)		n	n	18	18	1	2	1	1	3	no	Tank foamed and stabilized, tank not breached
	29	111.4 SE Trenches T-7		<1	n	n	128	4	1	1	1	4	no	Organics in groundwater
IAC-96	30	165 Triangle Area		215	<1	14	229	4	2	1	1	4	no	Contamination due to B779
	31	129 - Tank T-4, outside steam plant	<1	n	n	2	2	1	1	1	1	4	yes	PAHs in surface soil
	32	121, 126.1, 126.2 Tank T-8	<1	n	<1	2	2	1	1	1	1	4	yes	
	33	111.8 Trench T-11	<1	n	<1	<1	<1	1	1	3	1	3	no	
	34	Building 779 UBC		96	<1	<1	96	3	1	1	1	3	no	
	35	121 Tank T-27		n	n	64	64	2	1	1	1	3	no	
	36	143 771 Outfall		n	n	59	59	2	1	1	1	2	no	
	37	176 S&W Yard		46	<1	3	49	2	1	1	1	2	no	
	38	131 Rad Site #1 - 700 Area		n	n	26	26	2	1	1	1	2	no	
	39	133.4 Ash Pit #4		n	n	4	4	1	1	1	1	2	no	
	40	133.1 Ash Pit #1		44	<1	2	46	2	1	1	1	2	no	
	41	133.2 Ash Pit #2		44	<1	2	46	2	1	1	1	2	no	
	42	133.3 Ash Pit #3		44	2	<1	46	2	1	1	1	2	no	
	43	Old Landfill Area Plume		44	<1	<1	44	2	1	1	1	2	no	
	44	115 Original Landfill		174	<1	<1	174	4	1	1	1	2	no	
	45	190 Caustic Leak		172	<1	27	199	4	1	1	0.5	2	no	
	46	Building 123 Site (HHSSs 148, 121, 123UBC, RCRA Unit 40)		12	n	<1	12	1	1	1	0.5	2	no	
	47	120.1 North Fiberglassing area		9	4	1	14	1	1	1	1	1	no	
	48	150.3 Rad Site Between B771 & B774		n	n	20	20	1	1	1	1	1	no	
	49	214 750 Pad concrete/saltcrete storage		n	n	16	16	1	1	1	1	1	no	
	50	157.1 Rad Site North-Central Ave Ditch		n	n	13	13	1	1	1	1	1	no	
	51	157.2 Rad Site south		5	n	5	10	1	1	1	1	1	no	
	52	120.2 West Fiberglassing Area		2	n	5	7	1	1	1	1	1	no	
				n	n	6	6	1	1	1	1	1	no	
								1	1	1	1	1	no	PCB not above AL, listed under PCB 9.

September 30, 1998

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n = data not available

ER Ranking

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Status	Rank	IRSS Number and Name	Total Tank Contents	Total Ground Water	Total Subsurface Soil	Total Surface Soil	Total Chemical Score	ALF Score	SW Impact Score Multiplier	Potential for Further Release Multiplier	Professional Judgement Multiplier	Total Priority Score	Exceeds Tier 1 AL	General Comments
	53	144 Sewer line overflow		n	n	4	4	1	1	1	1	1	no	
	54	136.2 Cooling Tower Pond East of B444		n	n	4	4	1	1	1	1	1	no	
	55	163.1 Rad Site 700 North 8774		n	n	2	2	1	1	1	1	1	no	
	56	Building 440 Site		n	6	n	6	1	1	1	1	1	no	
	57	177-OU 10		<1	n	2	2	1	1	1	1	1	no	
	58	196 in Old Landfill		44	<1	<1	44	2	1	1	1	1	no	Investigation done for B440 expansion
	59	119.1 - OU 1 - Solvent Spill Site		<1	29	3	32	2	1	1	0.5	1	no	PCB hit above AL
	60	139.1 KOH, NaOH condensate tanks spill		n	n	19	19	1	1	1	0.5	1	no	HHRA, 10E-4 to 10-6
	61	139.2 Hydrofluoric Acid Tank spills		n	n	19	19	1	1	1	0.5	1	no	CAD/ROD amendment pending
	62	111.2 Trench T-5		<1	<1	1	1	1	1	1	0.5	0.5	no	PAHs in surface soil
	63	153 Oil Burn Pit		<1	<1	<1	<1	0	1	1	0.5	0.5	no	PAHs in surface soil
	64	164.3 Rad Site #2 800 Area, 887 Pad		n	n	<1	<1	0	1	1	1	0	no	In PA fence, eleven feet of soil removed during fence construction
	65	127 Low level Rad waste leak		n	n	<1	<1	0	1	1	1	0	no	
	66	186 Valve Vault 11, 12 and 13		n	n	<1	<1	0	1	1	1	0	no	
	67	150.4 Rad Site NW of B750		n	n	<1	<1	0	1	1	1	0	no	
	68	159 Rad Site B559		n	n	<1	<1	0	1	1	1	0	no	
	69	111.3 SE Trenches T-6		<1	<1	n	<1	0	1	1	1	0	no	
	70	111.5 SE Trenches T-8		n	<1	<1	<1	0	1	1	1	0	no	
	71	111.6 SE Trenches T-9		<1	<1	<1	<1	0	1	1	1	0	no	
	72	138 Bldg 779 Cooling Tower Blowdown		<1	<1	<1	<1	0	1	1	1	0	no	
	73	164.2 Rad Site #2, 800 Area, Bldg 886 Spill		<1	<1	<1	<1	0	1	1	1	0	no	
	74	111.7 SE Trenches T-10		<1	<1	<1	<1	0	1	1	1	0	no	
	75	137 Bldg 712/713 Cooling Tower Blowdown		n	tb	tb	<1	0	1	1	1	0	no	
	76	118.2 Solvent Spills North End of Bldg. 707		n	n	n	0	0	1	1	1	0	no	
	77	121-P08 OPWL Pipeline, 135 ft; Bldg. 881		<1	n	<1	0	0	1	1	1	0	no	
	78	121-P57 OPWL Pipeline, 112 ft; Bldg. 122		n	n	n	0	0	1	1	1	0	no	
	79	121-T12 Invalid tank location		n	n	n	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	80	121-T31 Invalid tank location		n	n	n	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	81	121-T33 Invalid tank location		n	n	n	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	82	121-T34 Invalid tank location		n	n	n	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	83	121-T35 Invalid tank location		n	n	n	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	84	175 S&W B 980 Container Storage Facility		n	n	n	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	85	182 444/453 Drum Storage Area		n	n	<1	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	86	205 Sump #3 Acid Site, SE B460		n	n	<1	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	87	206 Inactive D-386 HW Tank B374		n	n	<1	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	88	207 Inactive B444 Acid Dumpsters		n	n	<1	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	89	208 Inactive 444/447 Waste Storage.		n	n	<1	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	90	187 Sulfuric Acid Spill; B443		n	n	<1	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	91	134(N) Lithium Metal Destruction Site		n	n	n	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	92	134(S) Lithium Metal Destruction Site		<1	<1	<1	0	0	1	1	1	0	no	Evaluate using approved NANFA process
	93	150.6 Loading Dock		n	n	<1	0	0	1	1	1	0	no	Evaluate by NANFA process/ie B335 D&D
	94	154 Pallet Burn Site		n	n	<1	0	0	1	1	1	0	no	Evaluate by NANFA process/ie B335 D&D
	INV	171 Fire Training		n	n	<1	0	0	1	1	0.5	0	no	Evaluate with NANFA/PCB Hot Spot only
	INV	Building 444 UBC	134	n	n	<1	134	4	1	2	2	16	no	Removed during PA construction, verify only
	INV	Building 707 UBC	156	n	n	<1	156	4	1	1	2	8	no	Empirical data indicates free product present
	INV	121 Old Process Waste Lines-includes: 66 segments (35 000') & 22 tank units-not investigated	142	n	n	<1	0	1	1	1	2	8	no	Known contaminant plume
		123.2 Valve Vault w. of 707	1013	n	n	n	1013	7	1	1	2	2	yes	Many known spills
		147.1 MAAS Area									2	14		IHSS 121 includes the following italicized IHSSs
		149.1 OPWL to SEPS												Not characterized, probably highly contaminated
														Not characterized, probably highly contaminated
														Not characterized, probably highly contaminated
														Not characterized, probably highly contaminated

ER Ranking

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Status	Rank	IRIS Number and Name	Total Tank Contents	Total Ground Water	Total Subsurface Soil	Total Surface Soil	Total Chemical Score	ALF Score	SW Impact Score Multiplier	Potential for Further Release Multiplier	Professional Judgement Multiplier	Total Priority Score	Exceeds Tier 1 AL	General Comments
NFA		142.9 Pond B-5		<1	<1	<1	0	0	1	1	1	0		Passed CDPHE screen w/ pond and sediment data
NFA		152 Fuel Oil Tank 221 Spill		n	n	n	0	0	1	1	1	0		Evaluated using approved NANFA process
NFA		156.2 Soil Disposal Area		<1	<1	<1	0	0	1	1	1	0		HHRA, less than 10-6
NFA		166.1 Landfill Trench A		<1	<1	<1	0	0	1	1	1	0		Passed CDPHE screen
NFA		166.2 Landfill Trench B		<1	<1	n	0	0	1	1	1	0		Passed CDPHE screen
NFA		166.3 Landfill Trench C		<1	<1	n	0	0	1	1	0.5	0		HHRA, less than 10-6
NFA		167.1 N Landfill Spray Area		<1	<1	n	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6
NFA		167.2 Landfill Pond Spray Area		<1	<1	<1	0	0	1	1	0.5	0		Focused HHRA, 10E-4 to 10-6
NFA		167.3 Landfill South Spray Area		n	<1	<1	0	0	1	1	0.5	0		Evaluated using approved NANFA process
NFA		169 Hydrogen Peroxide Spill		n	n	<1	0	0	1	1	0.5	0		Evaluated using approved NANFA process
NFA		183 Gas Delox Facility		n	n	n	0	0	1	1	0.5	0		Evaluated using approved NANFA process
NFA		189 Nitric Acid Tank		n	n	n	0	0	1	1	0.5	0		Passed CDPHE screen
NFA		203 Inactive Hazardous Waste Storage Area		n	n	n	0	0	1	1	0.5	0		Passed CDPHE screen
NFA		209 Surface Disturbances		n	n	n	0	0	1	1	0.5	0		HHRA, less than 10-6
NFA		216.1 East Spray Field - OU 6		<1	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
NFA		F167.3 Former S. Spray Field		n	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
C-97		102 Oil Sludge Pit		<1	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
C-97		103 Chemical Burial		<1	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
C-97		104 Liquid Dumping		<1	<1	<1	<1	0	1	1	0.5	0		HHRA, less than 10-6
C-97		105.1 W Out-of-Service Fuel Tank		<1	<1	<1	<1	0	2	1	0.5	0		HHRA, less than 10-6
C-97		105.2 E Out-of-Service Fuel Tank		<1	10	<1	10	4	2	1	0.5	0		HHRA, less than 10-6
C-97		106 Outfall		<1	<1	<1	0	0	2	1	0.5	4	yes	HHRA, less than 10-6
C-97		107 Hillside Oil Leak		<1	<1	<1	0	0	2	1	0.5	0		HHRA, less than 10-6
C-97		119.2 Solvent Spill Site		<1	<1	<1	0	0	2	1	0.5	0		HHRA, less than 10-6
C-97		130 800 Area Rad Site #1		9	<1	<1	9	1	2	1	0.5	0		HHRA, less than 10-6
C-97		145 Sanitary Waste Line Leak		<1	<1	<1	34	2	2	1	0.5	1	no	HHRA, less than 10-6
C-97		199 Offsite Land Surface		<1	<1	<1	0	0	2	1	0.5	2	yes	HHRA, less than 10-6
C-97		200 Great Western Reservoir		n	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
C-97		201 Standley Lake		<1	<1	<1	0	0	1	1	0.5	0		HHRA, less than 10-6
C-97		202 Mower Reservoir		<1	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6 No groundwater issues
C-95		168 West Spray Field		<1	<1	<1	0	0	1	1	0.5	0		HHRA, 10E-4 to 10-6, plus sediment samples
C-95		178 B881 Drum Storage, Rm. 165		190	<1	<1	190	4	1	1	0.5	0		Passed CDPHE screen
C-95		179 B865 Drum Storage, Rm. 145		n	n	n	0	0	1	1	0.5	0		Passed CDPHE screen
C-95		180 B883 Drum Storage, Rm. 104		n	n	n	0	0	1	1	0.5	2	no	Passed CDPHE screen-CAD/ROD complete
C-95		204 Original Uranium Chip Roaster		n	n	n	0	0	1	1	0.5	0		No source found-CAD/ROD complete
C-95		211 B881 Drum Storage #26-R211		n	n	n	0	0	1	1	0.5	0		RCRA Clean Closure CAD/ROD complete
C-95		217 B881 Cyanide Treatment - #32		n	n	n	0	0	1	1	0.5	0		RCRA Clean Closure CAD/ROD complete
C-94		185 Solvent Spill		n	n	n	0	0	1	1	0.5	0		No source found-CAD/ROD complete
C-94		192 Pipeline		n	n	n	0	0	1	1	0.5	0		No source found-CAD/ROD Complete
C-94		193 Steam Condensate		3	n	n	3	1	1	1	0.5	0		No source found-CAD/ROD Complete
C-94		194 Solvent Spill		n	n	n	0	0	1	1	0.5	0		Evaluated using approved NANFA process
C-94		195 Nickel Carbonyl Disposal		n	n	n	0	0	1	1	0.5	0		No source found-CAD/ROD Complete
C-96		Closure complete		n	n	n	0	0	1	1	0.5	0		No source found-CAD/ROD Complete
IAC-96		Interim Action Complete												
NFA		Evaluated and recommended for NANFA status												
INV		Needs further investigation												
LOW		Low priority												
SR-98		Source Removed in FY98												